

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Peter de Groot et al.  
Patent No. : 7,106,454  
Issue Date : September 12, 2006  
Serial No. : 10/795,808  
Filed : March 8, 2004  
Title : PROFILING COMPLEX SURFACE STRUCTURES USING SCANNING  
INTERFEROMETRY

Art Unit : 2877  
Examiner : Michael A. Lyons

Attn.: Certificate of Corrections Branch  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL OF REQUEST FOR CERTIFICATE OF CORRECTION

Applicant hereby requests that a certificate of correction be issued for the above patent in accordance with the attached request.

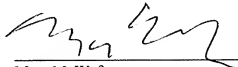
One or more of the errors sought to be corrected were made by applicant. The fees in the amount of \$100 to cover the required fee of 37 CFR §1.20(a) are being paid concurrently on the Electronic Filing System (EFS) by way of Deposit Account authorization.

Please apply any charges or credits to Deposit Account No. 06-1050, referencing 09712-341001.

Respectfully submitted,

Date: \_\_\_\_\_

2/6/08



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**CERTIFICATE OF MAILING BY EFS-WEB FILING**

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

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PATENT NO. : 7,106,454  
APPLICATION NO : 10/795,808  
DATED : SEPTEMBER 12, 2006  
INVENTOR(S) : PETER DE GROOT, ROBERT STONER AND XAVIER COLONNA DE LEGA

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### Column 2

Line 26, delete "that" after "about"

### Column 3

Line 54, insert --a-- before "second"

### Column 5

Line 16, replace "profiled" with --profile--

Line 37, delete "a" after "to"

### Column 6

Line 28, insert --be-- after "may"

### Column 8

Line 18, replace "signals" with --signal--

### Column 9

Line 56, replace "displays" with --display--

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It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 9 Cont.

Line 57, replace "transmits" with --transmit--

Column 10

Line 57, replace "objectives" with --objective--

Column 13

Line 54, insert --be-- after "may"

Column 14

Line 63, delete "is" after "polarizer"

Column 19

Line 25, replace "that" with --than--

Column 21

Line 66, replace " $q_{\beta,k} = q_{\beta,k}^s + q_{\beta,k}^p$ " with -- $q_{\beta,k} = q_{\beta,k}^s + q_{\beta,k}^p$ --

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It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

## Column 22

Line 4, replace " $\langle \phi_{\beta,k}^n \rangle = \arg(q_{\beta,k}^s + q_{\beta,k}^p)$ " with " $\langle \phi_{\beta,k}^n \rangle = \arg(q_{\beta,k}^s + q_{\beta,k}^p)$ --"  
Line 8, replace " $\langle \phi_{\beta,k}^n \rangle \neq (\phi_{\beta,k}^{ns} + \phi_{\beta,k}^{np})/2$ " with " $\langle \phi_{\beta,k}^n \rangle \neq (\phi_{\beta,k}^{ns} + \phi_{\beta,k}^{np})/2$ --"  
Line 12, replace " $\langle Q_{\beta,k} \rangle \neq (Q_{\beta,k}^s + Q_{\beta,k}^p)/2$ " with " $\langle Q_{\beta,k} \rangle \neq (Q_{\beta,k}^s + Q_{\beta,k}^p)/2$ --"  
Line 15, replace " $R_{\beta,k}^s, R_{\beta,k}^p$  and  $Z_{\beta,k}^s, Z_{\beta,k}^p$ " with " $R_{\beta,k}^s, R_{\beta,k}^p$  and  $Z_{\beta,k}^s, Z_{\beta,k}^p$ --"

## Column 23

Line 23, insert --are-- after "we"

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It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

## Column 24

Line 25, replace " $\vartheta_{1,\beta,k}^p = \frac{\tan(\psi_0 - \psi_{1,\beta,k})}{\tan(\psi_0 + \psi_{1,\beta,k})}$ " with

$$\vartheta_{1,\beta,k}^p = -\frac{\sin(\psi_0 - \psi_{1,\beta,k})}{\sin(\psi_0 + \psi_{1,\beta,k})}$$

Line 38, replace " $\vartheta_{2,\beta,k}^s = -\frac{\tan(\psi_{1,\beta,k} - \psi_{2,\beta,k})}{\tan(\psi_{1,\beta,k} + \psi_{2,\beta,k})}$ " with

$$\vartheta_{2,\beta,k}^s = -\frac{\sin(\psi_{1,\beta,k} - \psi_{2,\beta,k})}{\sin(\psi_{1,\beta,k} + \psi_{2,\beta,k})}$$

Line 47, replace " $z_{\beta,k} = \theta_{1,\beta,k}$  (simple surface, no thin film)" with

$$-z_{\beta,k} = \vartheta_{1,\beta,k} \quad (\text{simple surface, no thin film})$$

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It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### Column 24 Cont.

Line 52, replace " $\omega_{\beta,k} = \arg(\theta_{i,\beta,k})$ " with " $\omega_{\beta,k} = \arg(\theta_{i,\beta,k})$ " --

### Column 27

Line 8, replace "100xMirau" with "--100X MIRAU--

### Column 29

Line 10, replace "40 mm" with "--40 nm--  
 Line 11, replace "498 mm" with "--498 nm--  
 Line 21, replace "300 run" with "--300 nm--  
 Line 52, replace "removes" with "--remove--

### Column 30

Line 23, replace " $q_{K>0}^{ex} = M^{-1} \exp[-i\gamma_{yy} - i(K-K_0)\tau_{yy}] q_{K>0}^{ex}$ " with

--  $q_{K>0}^{ex} = M^{-1} \exp[-i\gamma_{yy} - i(K-K_0)\tau_{yy}] q_{K>0}^{ex}$  --

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### Column 30

Line 33, replace "functions" with --function--

Line 50, replace " $\Gamma_{yy} = K0 h'$ " with -- $\gamma_{yy} = K0 h'$ --

### Column 31

Line 49, replace "signals in" with --signals--

### Column 32

Line 48, replace "consider to" with --consider--

Line 56, delete "a"

### Column 33

Line 1, insert "be" after "can"

Line 26, replace "analysis the" with --analysis that--

Line 54, delete "be" after "would"

### Column 34

Line 5, replace " $I_{temp}^j(\zeta) = m_{temp}^j(\zeta) \cos[K_0 \zeta + \phi_{temp}^j(\zeta)]$ " with

-- $I_{temp}^j(\zeta) = m_{temp}^j(\zeta) \cos[K_0 \zeta + \phi_{temp}^j(\zeta)]$ --

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### Column 34 Cont.

Line 7, replace " $m_{temp}^j(\zeta)$  and  $\phi_{temp}^j(\zeta)$ " with --  $m_{temp}^j(\zeta)$  and  $\phi_{temp}^j(\zeta)$  --

Line 11, replace " $m_{temp}^j(\zeta)$  and  $\phi_{temp}^j(\zeta)$ " with --  $m_{temp}^j(\zeta)$  and  $\phi_{temp}^j(\zeta)$  --

Line 15, replace " $\bar{I}_{temp}^j(\zeta) = m_{temp}^j(\zeta) \exp[i(K_0\zeta + \phi_{temp}^j(\zeta))]$ " with

--  $\bar{I}_{temp}^j(\zeta) = m_{temp}^j(\zeta) \exp[i(K_0\zeta + \phi_{temp}^j(\zeta))]$  --

Line 25, replace " $\bar{I}_{pat}^k(\zeta) = w(\zeta) \bar{I}_{temp}^k(\zeta)$ " with

--  $\bar{I}_{pat}^k(\zeta) = w(\zeta) \bar{I}_{temp}^k(\zeta)$  --

Line 37, replace " $\bar{I}_{pat}^j$ " with --  $\bar{I}_{pat}^j$  --

### Column 35

Line 8, replace " $m_{temp}^j$ " with --  $m_{temp}^j$  --

Lines 11 and 12, replace " $\phi_{ex}, \phi_{pat}^j$ " with --  $\phi_{ex}, \phi_{pat}^j$  --

Line 15, replace " $\bar{I}_{pat}^j$ " with --  $\bar{I}_{pat}^j$  --

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### Column 35 Cont.

Line 56, replace " $\left\langle \left| \tilde{I}_{ex}(\zeta) \right|^2 \right\rangle \leftarrow \left\langle \left| \tilde{I}_{ex}(\zeta) \right|^2 \right\rangle + MinDenom \cdot \max(< \left| \tilde{I}_{ex} \right|^2 >)$ " with  

$$-- \left\langle \left| \tilde{I}_{ex}(\zeta) \right|^2 \right\rangle \leftarrow \left\langle \left| \tilde{I}_{ex}(\zeta) \right|^2 \right\rangle + MinDenom \cdot \max \left( \left\langle \left| \tilde{I}_{ex} \right|^2 \right\rangle \right) --$$

### Column 39

Claim 12, line 24, delete "a" before "expressed"

### Column 42

Claim 60, line 30, delete "a" before "expressed"

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